

**CLAIMS:**

1. A method for identifying an environmental source emitting a base frequency and waveform signal, the method comprising the steps of:

- a) measuring the waveform signal of the source in a predetermined time-interval;
- b) estimating the emitted waveform characteristic of the measured waveform;
- 5 c) determining a number of actions based on the estimated characteristic.

2. A method according to claim 1, wherein the determined number of actions comprises comparison of the waveform characteristic with a unique waveform characteristic with affiliated information stored in a memory.

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3. A method according to claim 2, wherein the affiliated information comprises location parameters.

4. A method according to claim 1, wherein a fast Fourier transform derives the  
15 base frequency of the estimated waveform characteristic.

5. A method according to claim 1, wherein undesired signals may be suppressed.

6. A method according to claim 1, wherein the base frequency is refined by  
20 finding a maximum in an autocorrelation function of the estimated waveform characteristic.

7. A method according to claim 1, wherein the estimated waveform characteristic is computed by averaging a number of estimated waveform characteristics.

8. A method according to claim 1, wherein a phase shift is applied to the  
25 estimated waveform.

9. A method according to claim 1, wherein the determined action comprises storing of the estimated waveform characteristic as a unique waveform characteristic.

10. A method according to claim 1, wherein the method allows locating a relative orientation of a detector device and the environmental source by use of two or more emission detectors.

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11. A method according to claim 1, wherein the method may predict and suppresses a specific periodic signal.

12. A method according to claim 1, wherein the environmental source is a source emitting light.

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13. A method according to claim 1, wherein the environmental source is a source emitting sonic signals.

14. A method according to claim 1, wherein the environmental source is a source emitting electromagnetic signals.

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15. A method according to claim 1, wherein the environmental source is a source emitting mechanical movement signals.

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16. A system for identifying an environmental source emitting a base frequency and waveform signal, the system comprising means for:

- a) measuring the waveform signal of the source in a predetermined time-interval;
- b) estimating the emitted waveform characteristic of the measured waveform;
- c) determining a number of actions based on the estimated characteristic.

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17. A system according to claim 16, wherein the determined number of actions comprises comparison of the waveform characteristic with a unique waveform characteristic with affiliated information stored in a memory.

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18. A system according to claim 17, wherein the affiliated information comprises location parameters.

19. A computer readable medium containing a program for making a processor carry out the method of any of the claims 1 through 15.